Index to

# EXPERIMENTAL MECHANICS

## VOLUME 38, 1998

## TITLE INDEX


Absolute Determination of the Isochromatic Parameter by Load-stepping Photoelasticity—M.J. Ekman and A.D. Nurse, 189-195 (Sept.).

Adiabatic Shear Localization in the Impact of Edge-notched Specimens—K.M. Roessig and J.J. Mason, 196-203 (Sept.).

An Automatic and Interactive Large-deformation Measurement System Based on Image Processing—E.-G. Septanika, L.-J. Ernst and L.-A.C.M. van den Hooff, 181-188 (Sept.).

Buckling Stresses of Composite Tubes Under Biaxial Compressive Loads—W.H. Wong, K.H. Ip and P.C. Tse, 126-131 (June).

Computer-aided Photoelastic Analysis of Orthogonal 3D Textile Composites: Part 2. Combining Least Squares and Finite-element Methods for Stress Analysis—K.-H. Tsai and C.-S. Chiu, 8-12 (Mar.).

A Curvature-ovalization Measurement Apparatus for Circular Tubes Under Cyclic Bending—W.-F. Pan, T.-R. Wang and C.-M. Hsu, 99-102 (June).

Discussion of the Article, "The Effect of Metallographic Structure on Clamped Plate Vibration Characteristics"—P.A.A. Laura, L. Ercoli and J.C. Paloto, 61 (Mar.).

Dynamic Characterization of Compliant Materials Using an All-polymeric Split Hopkinson Bar—O. Sawas, N.S. Brar and R.A. Brockman, 204-210 (Sept.).

Dynamic Compressive Behavior of Thick Composite Materials—H.M. Hsiao, I.M. Daniel and R.D. Cordes, 172-180 (Sept.).

Dynamic Fracture Behavior of Ceramics at Elevated Temperatures by Caustics—M. Suetsugu, K. Shimizu and S. Takahashi, 1-7 (Mar.).

Dynamic Response of Strain Gages up to 300 kHz—K. Ueda and A. Umeda, 93-98 (June).

Enhanced Measurement of Strain Distributions—S.F. Müller de Almeida and J.S. Hansen, 48-54 (Mar.).

Error Analysis and Thermal Expansion Measurement with Electron-beam Moiré—J.R. Berger, E.S. Drexler and D.T. Read, 167-171 (Sept.).

Experimental Analysis of Propagation of Fatigue Crack on Gears—B. Aberšek and J. Flašker, 226-230 (Sept.).

An Experimental Investigation of T-beam Stability Under Bending—M.S. Ellison and E. Corona, 42-47 (Mar.).

Experimental Measurement of Wrinkling in Membranes Undergoing Planar Deformation—C.H. Jenkins, F. Haugen and W.H. Spicher, 147-152 (June).

An Experimental Method for Considering Dispersion and Attenuation in a Viscoelastic Hopkinson Bar—C. Bacon, 242-249 (Dec.).

An Experimental Study of the Deformation Fields Around a Propagating Crack Tip—Y.J. Chao, P.F. Luo and J.F. Kalthoff, 79-85 (June).

Fatigue Crack Initiation and Propagation from Hole Defects—S.-H. Song and J.-S. Bae, 161-166 (Sept.).

A General Form for Calculating Residual Stresses Detected Using the Holographic Blind-hole Method—S.T. Lin, C.T. Hsieh and C.K. Lee, 255-260 (Dec.).

High-temperature Pressure-shear Plate Impact Experiments Using Pure Tungsten Carbide Impactors—K.J. Frutschy and R.J. Clifton, 116-125 (June).

Hollow Golf Club Head Modal Characteristics: Determination and Impact Applications—A. Hocknell, S.R. Mitchell, R. Jones and S.J. Rothberg, 140-146 (June).

Hybrid Method for Determining the Fraction of Plastic Work Converted to Heat—A.T. Zehnder, E. Babinsky and T. Palmer, 295-302 (Dec.).

Initiation and Arrest of Cracks on Two Pipeline Steels at Low Temperature—A. Ghoul, A. Bouabdallah and J. Petit, 37-41 (Mar.).

Interparticle Movement and the Mechanical Behavior of Extruded Powder Aluminum at Elevated Temperature—T.O. Woods, D.G. Berghaus and H.B. Peacock, 110-115 (June).

Intersonic Crack Propagation along Interfaces: Experimental Observations and Analysis—M. Kavaturu, A. Shukla and A.J. Rosakis, 218-225 (Sept.).

Measurement of Thermal Expansion Coefficients of Composites Using Strain Gages—F. Lanza Di Scalea, 233-240 (Dec.).

Measurement of Uniform and Localized Heat Dissipation Induced by Cyclic Loading—T.K. Jacobsen, B.F. Sörensen and P. Bröndsted, 289-294 (Dec.).

Mechanics of Slitting and Cutting Webs—R.R. Meehan and S.J. Burns, 103-109 (June).

Mode Identification of Rotating Disk—T.K. Ahn, 250-254 (Dec.).

Monitoring of the Alamillo Cable-stayed Bridge During Construction—J.R. Casas and A.C. Aparicio, 24-28 (Mar.).

A Photoelastic Study of Crack Repair—R.L. Hastie, R. Fredell and J.W. Dally, 29-36 (Mar.).

Quantitative Metallographic Study for Evaluation of Fracture Strain—M. Ohashi, 13-17 (Mar.).

Recent Advancement of Moiré and Microscopic Moiré Interferometry for Thermal Deformation Analyses of Microelectronics Devices—B. Han, 278-288 (Dec.).

Simulation of Errors in Automated Photoelasticity—W. Ji and E.A. Patterson, 132-139 (June).

Submicron Deformation Field Measurements: Part 1. Developing a Digital Scanning Tunneling Microscope—G. Vendroux and W.G. Knauss, 18-23 (Mar.).

Submicron Deformation Field Measurements: Part 2. Improved Digital Image Correlation—G. Vendroux and W.G. Knauss, 86-92 (June).

Submicron Deformation Field Measurements: Part 3. Demonstration of Deformation Determinations—G. Vendroux, N. Schmidt and W.G. Knauss, 154-160 (Sept.).

Time-frequency Error Measures for Dynamic Signal Reproduction [Technical Note]—M. French, 303-305 (Dec.).

A Transient Laser Doppler Anemometry for Measurement of Rapidly Changing Velocities of Solid Bodies—C.Z. Tsai and E. Wu, 261-269 (Dec.).

Transient Temperature Measurement Using Embedded Thermocouples—D. Rittel, 73-78 (June).

Tricolor Photoviscoelastic Technique and Its Application to Moving Contact—S. Yoneyama, J. Gotoh and M. Takashi, 211-217 (Sept.).

Ultrasonic Measurement of the Bending of a Bolt in a Shear Joint—A. Koshti, 270-277 (Dec.).

Whole-field Strain Measurement in a Pin-loaded Plate by Electronic Speckle Pattern Interferometry and the Finite Element Method—F. Lanza di Scalea, S.S. Hong and G.L. Cloud, 55-60 (Mar.).


## AUTHOR INDEX


Aberšek, B.—Experimental Analysis of Propagation of Fatigue Crack on Gears, 226-230 (Sept.).

Ahn, T.K.—Mode Identification of Rotating Disk, 250-254 (Dec.).

Aparicio, A.C.—Monitoring of the Alamillo Cable-stayed Bridge During Construction, 24-28 (Mar.).

Babinsky, E.—Hybrid Method for Determining the Fraction of Plastic Work Converted to Heat, 295-302 (Dec.).

Bacon, C.—An Experimental Method for Considering Dispersion and Attenuation in a Viscoelastic Hopkinson Bar, 242-249 (Dec.).

Bae, J.-S.—Fatigue Crack Initiation and Propagation from Hole Defects, 161-166 (Sept.).
Berger, J.R.—Error Analysis and Thermal Expansion Measurement with Electron-beam Moiré, 167-171 (Sept.).
Berghaus, D.G.—Interparticle Movement and the Mechanical Behavior of Extruded Powder Aluminum at Elevated Temperature, 110-115 (June).
Bouabdallah, A.—Initiation and Arrest of Cracks on Two Pipeline Steels at Low Temperature, 37-41 (Mar.).
Brar, N.S.—Dynamic Characterization of Compliant Materials Using an All-polymeric Split Hopkinson Bar, 204-210 (Sept.).
Brockman, R.A.—Dynamic Characterization of Compliant Materials Using an All-polymeric Split Hopkinson Bar, 204-210 (Sept.).
Bröndsted, P.—Measurement of Uniform and Localized Heat Dissipation Induced by Cyclic Loading, 289-294 (Dec.).
Burns, S.J.—Mechanics of Slitting and Cutting Webs, 103-109 (June).
Casas, J.R.—Monitoring of the Alamillo Cable-stayed Bridge During Construction, 24-28 (Mar.).
Chao, Y.J.—An Experimental Study of the Deformation Fields Around a Propagating Crack Tip, 79-85 (June).
Chiu, C.-S.—Computer-aided Photoelastic Analysis of Orthogonal 3D Textile Composites: Part 2. Combining Least Squares and Finite-element Methods for Stress Analysis, 8-12 (Mar.).
Clifton, R.J.—High-temperature Pressure-shear Plate Impact Experiments Using Pure Tungsten Carbide Impactors, 116-125 (June).
Cloud, G.L.—Whole-field Strain Measurement in a Pin-loaded Plate by Electronic Speckle Pattern Interferometry and the Finite Element Method, 55-60 (Mar.).
Cordes, R.D.—Dynamic Compressive Behavior of Thick Composite Materials, 172-180 (Sept.).
Corona, E.—An Experimental Investigation of T-beam Stability Under Bending, 42-47 (Mar.).
Dally, J.W.—A Photoelastic Study of Crack Repair, 29-36 (Mar.).
Daniel, I.M.—Dynamic Compressive Behavior of Thick Composite Materials, 172-180 (Sept.).
Drexler, E.S.—Error Analysis and Thermal Expansion Measurement with Electron-beam Moiré, 167-171 (Sept.).
Ekman, M.J.—Absolute Determination of the Isochromatic Parameter by Load-stepping Photoelasticity, 189-195 (Sept.).
Ellison, M.S.—An Experimental Investigation of T-beam Stability Under Bending, 42-47 (Mar.).
Ercoli, L.—Discussion of the Article, "The Effect of Metallographic Structure on Clamped Plate Vibration Characteristics," 61 (Mar.).
Ernst, L.-J.—An Automatic and Interactive Large-deformation Measurement System Based on Image Processing, 181-188 (Sept.).
Flašker, J.—Experimental Analysis of Propagation of Fatigue Crack on Gears, 226-230 (Sept.).
Fredell, R.—A Photoelastic Study of Crack Repair, 29-36 (Mar.).
French, M.—Time-frequency Error Measures for Dynamic Signal Reproduction [Technical Note], 303-305 (Dec.).
Frutschy, K.J.—High-temperature Pressure-shear Plate Impact Experiments Using Pure Tungsten Carbide Impactors, 116-125 (June).
Ghoul, A.—Initiation and Arrest of Cracks on Two Pipeline Steels at Low Temperature, 37-41 (Mar.).
Gotoh, J.—Tricolor Photoviscoelastic Technique and Its Application to Moving Contact, 211-217 (Sept.).
Han, B.—Recent Advancement of Moiré and Microscopic Moiré Interferometry for Thermal Deformation Analyses of Microelectronics Devices, 278-288 (Dec.).
Hansen, J.S.—Enhanced Measurement of Strain Distributions, 48-54 (Mar.).
Hastie, R.L.—A Photoelastic Study of Crack Repair, 29-36 (Mar.).
Haugen, F.—Experimental Measurement of Wrinkling in Membranes Undergoing Planar Deformation, 147-152 (June).
Hocknell, A.—Hollow Golf Club Head Modal Characteristics: Determination and Impact Applications, 140-146 (June).
Hong, S.S.—Whole-field Strain Measurement in a Pin-loaded Plate by Electronic Speckle Pattern Interferometry and the Finite Element Method, 55-60 (Mar.).
Hsiao, H.M.—Dynamic Compressive Behavior of Thick Composite Materials, 172-180 (Sept.).
Hsieh, C.T.—A General Form for Calculating Residual Stresses Detected Using the Holographic Blind-hole Method, 255-260 (Dec.).
Hsu, C.-M.—A Curvature-ovalization Measurement Apparatus for Circular Tubes Under Cyclic Bending, 99-102 (June).
Ip, K.H.—Buckling Stresses of Composite Tubes Under Biaxial Compressive Loads, 126-131 (June).
Jacobsen, T.K.—Measurement of Uniform and Localized Heat Dissipation Induced by Cyclic Loading, 289-294 (Dec.).
Jenkins, C.H.—Experimental Measurement of Wrinkling in Membranes Undergoing Planar Deformation, 147-152 (June).
Ji, W.—Simulation of Errors in Automated Photoelasticity, 132-139 (June).
Jones, R.—Hollow Golf Club Head Modal Characteristics: Determination and Impact Applications, 140-146 (June).
Kalthoff, J.F.—An Experimental Study of the Deformation Fields Around a Propagating Crack Tip, 79-85 (June).
Kavaturu, M.—Intersonic Crack Propagation along Interfaces: Experimental Observations and Analysis, 218-225 (Sept.).
Knauss, W.G.—Submicron Deformation Field Measurements: Part 1. Developing a Digital Scanning Tunneling Microscope, 18-23 (Mar.).
Knauss, W.G.—Submicron Deformation Field Measurements: Part 2. Improved Digital Image Correlation, 86-92 (June).
Knauss, W.G.—Submicron Deformation Field Measurements: Part 3. Demonstration of Deformation Determinations, 154-160 (Sept.).
Koshti, A.—Ultrasonic Measurement of the Bending of a Bolt in a Shear Joint, 270-277 (Dec.).
Lanza di Scalea, F.—Measurement of Thermal Expansion Coefficients of Composites Using Strain Gages, 233-240 (Dec.).
Lanza di Scalea, F.—Whole-field Strain Measurement in a Pin-loaded Plate by Electronic Speckle Pattern Interferometry and the Finite Element Method, 55-60 (Mar.).
Laura, P.A.A.—Discussion of the Article, "The Effect of Metallographic Structure on Clamped Plate Vibration Characteristics," 61 (Mar.).
Lee, C.K.—A General Form for Calculating Residual Stresses Detected Using the Holographic Blind-hole Method, 255-260 (Dec.).
Lin, S.T.—A General Form for Calculating Residual Stresses Detected Using the Holographic Blind-hole Method, 255-260 (Dec.).
Luo, P.F.—An Experimental Study of the Deformation Fields Around a Propagating Crack Tip, 79-85 (June).
Mason, J.J.—Adiabatic Shear Localization in the Impact of Edge-notched Specimens, 196-203 (Sept.).
Meehan, R.R.—Mechanics of Slitting and Cutting Webs, 103-109 (June).
Mitchell, S.R.—Hollow Golf Club Head Modal Characteristics: Determination and Impact Applications, 140-146 (June).
Müller de Almeida, S.F.—Enhanced Measurement of Strain Distributions, 48-54 (Mar.).
Nurse, A.D.—Absolute Determination of the Isochromatic Parameter by Load-stepping Photoelasticity, 189-195 (Sept.).
Ohashi, M.—Quantitative Metallographic Study for Evaluation of Fracture Strain, 13-17 (Mar.).
Palmer, T.—Hybrid Method for Determining the Fraction of Plastic Work Converted to Heat, 295-302 (Dec.).
Paloto, J.C.—Discussion of the Article, "The Effect of Metallographic Structure on Clamped Plate Vibration Characteristics," 61 (Mar.).
Pan, W.-F.—A Curvature-ovalization Measurement Apparatus for Circular Tubes Under Cyclic Bending, 99-102 (June).
Patterson, E.A.—Simulation of Errors in Automated Photoelasticity, 132-139 (June).
Peacock, H.B.—Interparticle Movement and the Mechanical Behavior of Extruded Powder Aluminum at Elevated Temperature, 110-115 (June).
Petit, J.—Initiation and Arrest of Cracks on Two Pipeline Steels at Low Temperature, 37-41 (Mar.).
Read, D.T.—Error Analysis and Thermal Expansion Measurement with Electron-beam Moiré, 167-171 (Sept.).
Rittel, D.—Transient Temperature Measurement Using Embedded Thermocouples, 73-78 (June).

Roessig, K.M.—Adiabatic Shear Localization in the Impact of Edge-notched Specimens, 196-203 (Sept.).
Rosakis, A.J.—Intersonic Crack Propagation along Interfaces: Experimental Observations and Analysis, 218-225 (Sept.).
Rothberg, S.J.—Hollow Golf Club Head Modal Characteristics: Determination and Impact Applications, 140-146 (June).
Sawas, O.—Dynamic Characterization of Compliant Materials Using an All-polymeric Split Hopkinson Bar, 204-210 (Sept.).
Schmidt, N.—Submicron Deformation Field Measurements: Part 3. Demonstration of Deformation Determinations, 154-160 (Sept.).
Septanika, E.-G.—An Automatic and Interactive Large-deformation Measurement System Based on Image Processing, 181-188 (Sept.).
Shimizu, K.—Dynamic Fracture Behavior of Ceramics at Elevated Temperatures by Caustics, 1-7 (Mar.).
Shukla, A.—Intersonic Crack Propagation along Interfaces: Experimental Observations and Analysis, 218-225 (Sept.).
Song, S.-H.—Fatigue Crack Initiation and Propagation from Hole Defects, 161-166 (Sept.).
Söensen, B.F.—Measurement of Uniform and Localized Heat Dissipation Induced by Cyclic Loading, 289-294 (Dec.).
Spicher, W.H.—Experimental Measurement of Wrinkling in Membranes Undergoing Planar Deformation, 147-152 (June).
Suetsugu, M.—Dynamic Fracture Behavior of Ceramics at Elevated Temperatures by Caustics, 1-7 (Mar.).
Takahashi, S.—Dynamic Fracture Behavior of Ceramics at Elevated Temperatures by Caustics, 1-7 (Mar.).
Takashi, M.—Tricolor Photoviscoelastic Technique and Its Application to Moving Contact, 211-217 (Sept.).
Tsai, C.Z.—A Transient Laser Doppler Anemometry for Measurement of Rapidly Changing Velocities of Solid Bodies, 261-269 (Dec.).
Tsai, K.-H.—Computer-aided Photoelastic Analysis of Orthogonal 3D Textile Composites: Part 2. Combining Least Squares and Finite- element Methods for Stress Analysis, 8-12 (Mar.).
Tse, P.C.—Buckling Stresses of Composite Tubes Under Biaxial Compressive Loads, 126-131 (June).
Ueda, K.—Dynamic Response of Strain Gages up to 300 kHz, 93-98 (June).
Umeda, A.—Dynamic Response of Strain Gages up to 300 kHz, 93-98 (June).
van den Hooff, L.-A.C.M.—An Automatic and Interactive Large-deformation Measurement System Based on Image Processing, 181-188 (Sept.).
Vendroux, G.—Submicron Deformation Field Measurements: Part 1. Developing a Digital Scanning Tunneling Microscope, 18-23 (Mar.).
Vendroux, G.—Submicron Deformation Field Measurements: Part 2. Improved Digital Image Correlation, 86-92 (June).
Vendroux, G.—Submicron Deformation Field Measurements: Part 3. Demonstration of Deformation Determinations, 154-160 (Sept.).
Wang, T.-R.—A Curvature-ovalization Measurement Apparatus for Circular Tubes Under Cyclic Bending, 99-102 (June).
Wong, W.H.—Buckling Stresses of Composite Tubes Under Biaxial Compressive Loads, 126-131 (June).
Woods, T.O.—Interparticle Movement and the Mechanical Behavior of Extruded Powder Aluminum at Elevated Temperature, 110-115 (June).
Wu, E.—A Transient Laser Doppler Anemometry for Measurement of Rapidly Changing Velocities of Solid Bodies, 261-269 (Dec.).
Yoneyama, S.—Tricolor Photoviscoelastic Technique and Its Application to Moving Contact, 211-217 (Sept.).
Zehnder, A.T.—Hybrid Method for Determining the Fraction of Plastic Work Converted to Heat, 295-302 (Dec.).